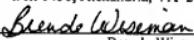


IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

ART UNIT: 2853	<u>CERTIFICATE OF MAILING UNDER 37 C.F.R. § 1.8</u>
EXAMINER: Laura E. Martin	DATE OF DEPOSIT: 12/11/2008
FIRST NAMED INVENTOR: Paul Bruinsma	I hereby certify that this paper or fee (along with any paper or fee referred to as being attached or enclosed) is being submitted on the date indicated above via:
SERIAL NO.: 10/825,736	<input checked="" type="checkbox"/> EFS Web
FILED: 4/15/2004	<input type="checkbox"/> facsimile to 571-273-8300
CONF. NO.: 8822	<input type="checkbox"/> the United States Postal Service with sufficient postage as first class mail addressed to: Mail Stop _____, Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.
FOR: INK-JET PRINTING SYSTEM WITH REDUCED NOZZLE CLOGGING	 Brenda Wiseman
DOCKET NO.: 200309260-1	Brenda Wiseman

APPELLANTS' REPLY BRIEF UNDER 37 C.F.R. § 41.41

Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450  
Mail Stop Appeal Brief – Patents

Dear Sir:

Appellants submit this Reply Brief in response to the Examiner's Answer mailed on November 3, 2008. The Examiner's Answer was submitted in connection with the Appeal Brief, filed on August 19, 2008, which was filed in response to the final rejection of the Patent Office, mailed March 6, 2008, in the above-identified application.

I.       STATUS OF CLAIMS

Claims 1-7, 9-22, and 24-30 remain pending. Claims 8 and 23 have been canceled.

Thus, the claims on appeal in this application are claims 1-7, 9-22, and 24-30, which constitute all of the claims presently pending for consideration.

II. GROUNDΣ OF REJECTION TO BE REVIEWED ON APPEAL

The issue presented for review is: (1) whether claims 1-3, 5-7, 9-18, 20-22, and 24-30 are unpatentable under 35 U.S.C. § 103(a) over U.S. Patent No. 5,958,121 (hereinafter “Lin”) in view of U.S. Patent No. 5,624,484 (hereinafter “Takahashi”); and (2) whether claims 4 and 19 are unpatentable under 35 U.S.C. § 103(a) over Lin and Takahashi, and further in view of U.S. Patent No. 6,328,413 (hereinafter “Rutland”).

### **III. ARGUMENT**

#### **A. Response to Arguments in Examiner's Answer**

The arguments set forth in this Reply Brief are provided in direct response to the arguments set forth in the Examiner's Answer mailed November 3, 2008 (hereinafter "the Answer"). Therefore, any arguments presented by Appellant over the prosecution of the present application or in Appellant's Appeal Brief but not repeated here are not to be construed as having been disavowed or withdrawn by Appellant absent an explicit statement to the contrary.

##### **1. Rejection Under 35 U.S.C. § 103(a) over Lin in view of Takahashi (claims 1-3, 5-7, 9-18, 20-22, and 24-30)**

In the Final Office Action issued March 6, 2008, the Examiner rejected claims 1-3, 5-7, 9-18, 20-22, and 24-30 as being allegedly unpatentable over Lin in view of Takahashi under 35 U.S.C. § 103(a). In the Appeal Brief filed August 19, 2008 (hereinafter "the Appeal Brief"), Appellant argued that Lin failed to teach or suggest certain elements of claims 1 and 16, and that Takahashi failed to remedy the deficiencies of Lin. With regard to Lin, Appellant argued that that reference failed to clearly teach the use of an anionic dye of one weight percent concentration with an anionic dispersing agent with another weight percent concentration so as to suggest the elements of the claimed invention. In the Answer, the Examiner has pointed to column 21, lines 11-37 of Lin to assert that such a combination is taught. To present a *prima facie* case of obviousness, "the examiner must provide evidence which as a whole shows that the legal determination sought to be proved...is more probable than not." MPEP 2142 (emphasis added). Appellant submits that the Examiner is relying on a limited section of the disclosure without regard to the whole teaching of Lin.

Regarding the language pointed to by the Examiner, Appellant submits that the phrase “the dye or pigment” should be read in light of the preceding disclosure within its specification, particularly from column 17, line 64 up to the cited language. Particularly, Lin teaches that colorants to be used in the inks can be selected from dyes, pigments, and mixtures thereof. Column 17, 64-67. In view of this and the knowledge of those skilled in the art that dispersants generally are of no need in inks which solely utilize dye colorants, it is reasonable that any subsequent discussion of dispersants be provided to address those embodiments that include pigments. Not surprisingly, Lin immediately goes on to discuss the use of dispersants exclusively in the context of pigments. Column 18, lines 4-23. Lin then goes on to set forth lists of suitable dyes and pigments, but without affirmatively teaching the combination of an anionic dye colorant with an anionic dispersant polymer. Column 18, line 44 to column 21, line 11. Appellant submits that in view of the preceding disclosure and the knowledge in the art, the phrase “the dye or pigment” at column 21, line 11 cannot be considered a clear or affirmative teaching of the combination of elements recited in each of claims 1 and 16. Stated another way, the use of dispersants is well known, and often required, when using pigments (particulate colorants), so that the pigments stay dispersed in solution (thus, the term dispersant). Dyes are generally soluble, and need no dispersing. Thus, based on this conventional knowledge, and based on the fact that there is nothing taught in this reference to the contrary of this conventional knowledge, absent a clear statement to the contrary, one skilled in the art would never assume that the dispersant discussion relates to anything other than the pigment.

Appellant has also argued in the Appeal Brief that Lin focuses on anionic dyes separately from dyes with stabilizing agents associated therewith. In the present response, Appellant again

points out that in describing the disclosed invention, Lin sets forth anionic dyes and stabilized dyes as separate possible components of the disclosed ink set. See, e.g. column 1, lines 15-26. In the Answer, the Examiner points to language at column 18, lines 44-48 as suggesting that the anionic dyes listed thereafter are to be combined with anionic stabilizing agents. The language cited in fact states that “[a]ny suitable dye or mixture of dyes that is compatible with the other ink ingredients can be used.” Once again, Appellant submits that this vague language (e.g. “the other ink ingredients”) should be read in view of the whole disclosure and the knowledge in the art. One skilled in the art would be well aware that inks commonly contain a variety of other ingredients besides colorant, including biocides, humectants, and surfactants. Such a one would more likely view this language as advising compatibility of the dye with these kinds of additives. This language does not demonstrate that a skilled artisan would more likely than not associate the listed anionic dyes with anionic dispersants. The Examiner asserts that “[i]t would obvious that [the listed anionic dyes] is referring to the second ink as the first ink contains specifically anionic dyes and the third and fourth inks contain pigments.” Appellants point out that Lin discloses a composition with two inks. The “inks” to which the Examiner appears to be referring are actually a list of possible colorants for the first ink of the composition. See e.g. column 11, lines 13-31. As such, Appellant submits that the inclusion of anionic inks in the list beginning at column 18, line 45 does not raise the assumption argued by the Examiner.

The Examiner has combined Lin with Takahashi, where Takahashi is cited to provide an alleged teaching of overprinting and underprinting of a fixer composition. In the Appeal Brief, Appellant has asserted that the present claims are also patentable over this combination of references because Takahashi fails to remedy the deficiencies of Lin described above.

Specifically, Takahashi does not teach or suggest an ink-jet ink with from 0.1 wt% to 6 wt% of an anionic dye colorant and from 0.05 wt % to 1.0 wt % of an anionic dispersant polymer. Rather, like Lin, Takahashi teaches these components as alternatives, with the dispersant being used in conjunction with pigments rather than dyes. In view of this, Appellant argued that Takahashi supports the assertion that one skilled in the art would typically not use dispersants with dyes, but rather would use dispersants with pigments. In the Answer, the Examiner has responded that Takahashi was combined with Lin to teach underprinting and overprinting. Appellant submits that in view of the failure of Lin to teach the other elements of claims 1 and 16, it is quite relevant to point out that Takahashi not only fails to remedy this deficiency but rather reinforces it.

In view of the arguments presented above and in the Appeal Brief, Appellant reiterates the assertion that that claims 1 and 16 are patentable over the combination of Lin and Takahashi, as these references fail to teach every element of these claims in the arrangement required by the claims. Furthermore, this is also true for all of the claims depending from claims 1 and 16, in that each includes all of the limitations of the claim from which it depends. Additionally, these dependent claims are also patentable for reasons independent of their dependency on claims 1 and 16. Namely, certain dependent claims recite additional limitations that are not taught in combination by the cited references. Therefore, the Appellant reiterates that claims 1-3, 5-7, 9-18, 20-22, and 24-30 are allowable.

## 2. Rejection over Lin and Takahashi further in view of Rutland (claims 4 & 19)

In the Final Office Action, the Examiner cited Rutland, in combination with Lin and Takahashi, to remedy the deficiency in claims 4 and 19 of a teaching of ink-jet printing nozzles

and fixer printing nozzles configured in a proximity such that, upon jetting, small amounts of fixer composition aerosol jetted from the fixer printing nozzles contact the ink-jet ink printing nozzles, thereby resulting in the ink-jet printing nozzles being susceptible to cross-contamination by the fixer composition. In the Appeal Brief, Appellant argued that Rutland fails to remedy the missing elements of the combination of Takahashi and Lin with respect to the presence of an anionic dye and an anionic dispersing agent. Appellant argued further that Rutland more likely teaches away from such a combination, because Rutland teaches a method and/or system for minimizing cross-contamination which involves, amongst other things, configuring the print nozzles or cartridges in such a way as to eliminate or avoid cross-contamination. In the Answer, the Examiner has responded that "Rutland does not teach away from spitting" and that "the problems foreseen in Rutland will not prevent the present usage in the combination of references." Appellant now points out that the claims at issue require not spitting *per se*, but an arrangement of printing nozzles in which the claimed printing system and method are particularly relevant. It should be kept in mind, therefore, that claims 4 and 19 include the limitations recited in claims 1 and 16, respectively. As such, the question is whether the asserted combination of references would suggest the claimed invention as a whole. Appellants assert that, in addition to its failure to remedy the deficiencies of Lin and Takahashi, Rutland would guide one skilled in the art to an arrangement of elements quite unlike that set forth in the claims. Rather than the composition and arrangement recited in Appellant's claims, Rutland would more likely lead one to a more conventional ink set employed with a bidirectional spitting scheme coupled with a configuration of the print cartridges. Therefore Appellant reiterates the assertion that Rutland teaches away from the required elements of claims 4 and 19.

VI. CONCLUSION

In conclusion, Appellants respectfully submit that the claims on appeal set forth in the Appendix are patentably distinct from the asserted prior art references. For the reasons stated in this Reply Brief and in the Appeal Brief, reversal of the Examiner's rejection is requested.

Dated this 11<sup>th</sup> day of December.



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